May 25, 1915.

Prof. E. W. MacBride, D.Sc., F.R.S., Vice-President, in the Chair.

Mr. R. I. Pocock, F.R.S., F.Z.S., Curator of Mammals, exhibited two pieces of skin cut from the shoulder of a wild boar and a wild sow (*Sus scrofa*) to show the difference in thickness between the two, the skin of that area in the boar being about four times as thick as in the sow.

Mr. Pocock also exhibited some skins of Asiatic and African Porcupines, and pointed out the gradation that could be traced from the Bornean *Trichus* through *Atherura* to *Hystrix* in the shortening of the tail, the evolution of the rattle, the growth of the crest on the head, and the elaboration of the spine-armature. He also showed a piece of the skin of a Javan Porcupine with some of the quills cut short to illustrate their definite arrangement in short, regular transverse rows.

June 8, 1915.

Dr. S. F. Harmer, M.A., F.R.S., Vice-President, in the Chair.

The Secretary read the following report on the Additions to the Society's Menagerie during the month of May, 1915 :—

The number of registered additions to the Society's Menagerie during the month of May was 136. Of these 66 were acquired by presentation, 9 by purchase, 14 were received on deposit, 35 in exchange, and 12 were born in the Gardens.

The number of departures during the same period, by death and removals, was 123.

Amongst the additions special attention may be directed to :—

1 Feline Douroucouli (*Aotes felinus*), 2 White-browed Hares (*Sylvilagus superciliaris*), and 1 Collared Peccary (*Tayassu tajaçu*), from Banco, Colombia, presented by W. K. Pomeroy, F.Z.S., on May 3rd.

4 Patagonian Cavies (*Dolichotis magellanicus*) and 2 Golden Agoutis (*Dasyprocta agouti*), from Argentina, received in exchange on May 4th.

1 Reindeer (*Rangifer tarandus*), born in the Menagerie on May 9th.

1 Leopard Cub (*Felis pardus*), from Kongwe, Nyasaland, presented by Miss A. Winch on May 3rd.

1 de Winton's Mouse (*Mus sylvaticus wintoni*), from Horsham, new to the Collection, presented by Sir E. G. Loder, Bart., V.P.Z.S., on May 21st.

4 Siamese Fighting-Fish (*Betta pugnax*), from Siam, new to the Collection, presented by C. Lamont Groundwater on May 3rd.

Mr. E. T. Newton, F.R.S., F.Z.S., exhibited two horns of the Sabre-horned Antelope (*Oryx leucoryx*) not attached to the skull, but supposed to be a pair. The differences between the two horns, both as regards their curvature and peculiar annulation, raise a doubt as to their belonging to the same species, unless these differences may be due to sex. They are said to have come from West Africa. Each of these horns has about five inches of the basal portion covered in leather, with a large loop of the same material, which is evidently native work; but for what purpose this covering was intended is not clear. There is one horn in the British Museum which has indications of having been similarly covered.

A "nest"-making Chimpanzee.

Mr. George Jennison contributed the following note upon the "nest" made by a Chimpanzee in the Belle Vue Zoological Gardens, Manchester:—

A female Chimpanzee (*Anthropopithecus calvus*) was purchased for our collection on May 8th, 1913. She was not, in fact is not yet, adult, but had good health, and was kept until May 1914 in a rather small cage ($12' \times 12 \times 10'$) having access to the open air. She was then removed to our new Chimpanzee house and installed in a large cage, through the middle of which there is a beam about 3 inches wide. Early in August it was noticed that she took a small supply of hay, or would even fray out a rope and lay it carefully along the beam and there lie.

We therefore nailed a rough branch horizontally from the beam to the wall, so enclosing a space of about 3 feet, and another cross-branch to make a very rough base, and provided a supply of hay, straw, and leafed twigs which were thrown on the floor ten feet below. Next morning the nest was partly made. Careful watching by W. Antcliffe, the keeper, showed that she carried up at first one or two straws and then proceeded to gather a bundle of twigs, which she tucked between one leg and her thigh, dragging herself to her nest by her arms and the other leg.

The twigs were carefully arranged with the leaves to the centre of the nest, and she also gathered up one of her swinging ropes, which she laid in short parallel lines on the twigs.

Mindful of Du Chaillu ('Exploration in Equatorial Africa'), we nailed suitable branches over the nest as a basis for a roof, but no attempt has been made to utilize them to form a shelter, as, of course, there is no rain in the house.

The animal spends most of her time in the nest, to which she carries all her food, even a glass of tea, which is taken up like the nesting material in the hollow of the thigh.

From time to time the nest is either thrown out or falls through, and is reconstructed with fresh material.

Having succeeded so well with this animal, similar facilities

were given to three females (*A. troglodytes*) in the adjoining cage, but no attempt was made to use them. Nevertheless, although they usually sleep on the floor-level, they will carry a sack into their trees and sleep upon it. *A. calvus*, the "nest"-builder, will also take up a sack and sleep on it.

The Habits of Chimpanzees in African Forests.

Dr. C. C. Christy, M.B., C.M., F.Z.S., remarked "That it was somewhat misleading to talk of a Chimpanzee's nest. The little sleeping-platforms of the Chimpanzee made by bending inwards the leafy parts of two or three of the smaller branches of some sapling or larger tree, are quite a feature of the Ituri forests.

"They are generally close to the stem, and often comparatively low down, sometimes as low as 15 feet from the ground.

"They are small structures, are occupied by one or a pair of animals, and are never used a second night. They are made in a minute by reaching out and pulling in the branches, bending them or breaking them off.

"Chimpanzees feed largely on the ground, but I am doubtful if they ever sleep there. They are extremely wary and noisy. When met with in the daytime they are usually in the trees. At the first alarm the big males come down from any height in two swings and a drop and make off, but the females and rest of the troop swing and climb slowly from branch to branch. They rarely jump as monkeys do, and being too clumsy to travel quickly are easily overtaken. For such a big strong animal they are extraordinarily easy to kill. One serious body wound with a little ·22 bullet is sufficient to bring them down. A slightly wounded one will make for the top of a big tree, and by breaking off branches and pushing them beneath him will in less than a minute construct a big platform, upon which he will sulk or keep up a furious screeching entirely hidden from beneath."

Variation in Horns of Cattle.

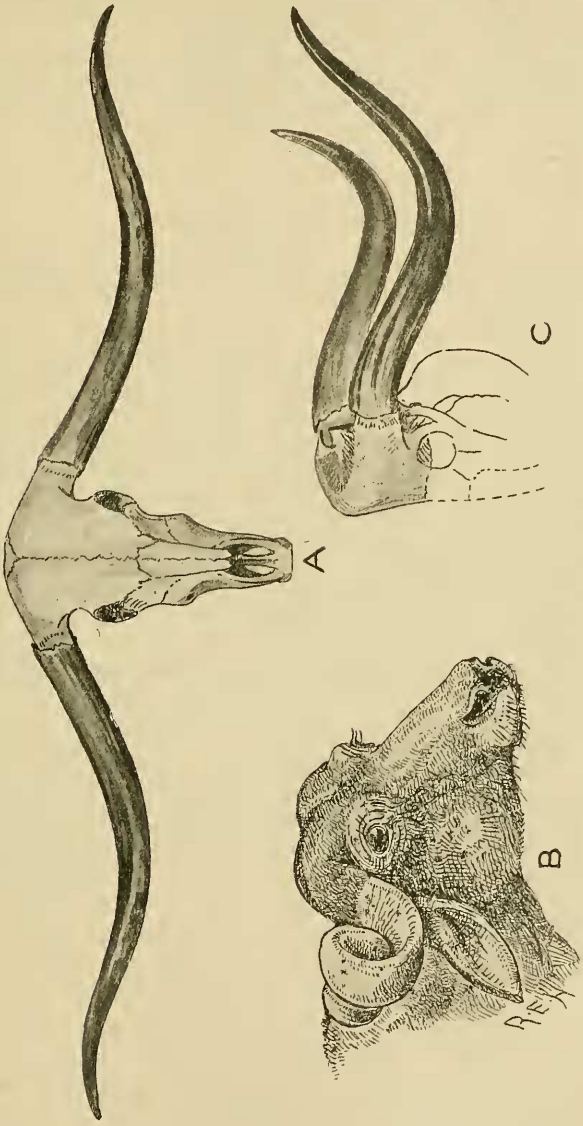
Mr. R. E. Holding exhibited and made remarks on several specimens indicating variation in the horns of certain local breeds of West-African humped cattle—viz. a single horn of the Gnami or Botlitli cattle from the neighbourhood of Lake Gnami, of which a fine skull has recently been added to the British Museum (Nat. Hist.). The horn exhibited is 4 ft. 5 in. long over the curve, and if say 11 inches were allowed for width of skull, the total measurement from tip to tip equals 9 ft. 9 in.

The specimen exhibited was part of a cargo of West-African horns recently sold in London.

The other West-African specimen, also of the humped breed,

was a pair of lyre-shaped black horns. The frontal bone was rounded considerably, thus giving the horns a posterior direction

Text-figure 1.



A. Skull and horns of Guami Ox, recently presented to the British Museum (Nat. Hist.) by Mr. R. A. Bailey, Resident Magistrate, Ngamiland. Length from tip to tip over the curves 10 feet.
B. Horn of "Delhi" variety of domesticated Indian Buffalo, placed on a drawing of the head of an Indian Buffalo to show actual position.
C. Lyre-shaped horns of N.W. African black variety of humped cattle.

reaching over the withers, the points turning outward. It is apparently a common breed. Length of one horn 36 inches.

The pair of Indian horns shown were those of the "Delhi" variety of the domesticated Indian Buffalo (*Bos bubalus*), of which there are several local varieties—viz. Deccani, Kathiwar, and others. The specimen was of unusual form—massive at the base, with a compressed spiral growing backward.

Mr. Holding also exhibited a print from a German colonial paper showing another variety of these long-horned cattle from Ruando, N.W. Africa, where considerable herds are owned by the Sultan.

Humming-birds in Captivity.

Mr. Alfred Ezra, F.Z.S., exhibited a living specimen of Ricordi's Humming-bird (*Sporadinus ricordi*) and made the following remarks:—

"This little bird was brought over from Cuba by a dealer twelve months ago in almost a dying state. Having been fed only on sugar and water on the voyage, he was extremely weak and not able to move from his perch. His feathers were stuck together with the sticky syrup, and the bird looked miserable, not being able to make use of his wings. The first thing I did was to wash him (a difficult matter with such a little mite) in warm water with a drop of brandy in it, and after drying him thoroughly he was put back into a cage near a fire. In half an hour he was buzzing about in the cage and looked much happier. I fed him as I do my sun-birds, and he took to the food at once. For the first three nights I kept the light on for him to feed by, and in a week's time the bird began to pick up, and grew stronger every day. About November last he went through a partial moult, and again this April he went through a very heavy moult and got over it perfectly. He is kept in a fair-sized wire cage, and is given his freedom in a large room every morning for an hour, when he darts about at a terrific pace and enjoys it immensely, returning to his cage when he has had enough. It is astonishing to see how he will never knock himself against the window as most birds would do, but will always pull up just in time, no matter what pace he is flying at. Besides the syrup, which is his chief food, he will eat grapes and aphides, but I do not think the latter are essential, he having done quite well without them for all the long winter months. All his food is taken on the wing, which gives him plenty of exercise, and I am sure my success is due to this. He will not eat the aphides unless they are flying about, and I have never seen him pick one up, even if he sees them crawling on his perch. If some are lying at the bottom of the cage he will fly at a great pace close to them, and when they fly up he will swallow them one after another quickly. The bird is sprayed with tepid water every morning, no matter what the weather is like, and then he will wash himself by flying in and out of the damp leaves of a small

plant placed in the cage. He loves the sun, but seemed quite happy without it through the winter. For a song he makes a sound like the sparks of a wireless at work. I think that so long as the birds have artificial light to feed by in the long winter nights for two or three hours, they do quite well. They must be kept warm, for as soon as the temperature drops below 65 degrees they begin to look unhappy. I had a very extraordinary experience with a Garnet-throated Carib (*Eulampis jugularis*), which was sent to me by a friend from Paris last May. It was brought over by a friend in a small cage which was well wrapped up. When I got the bird home I found him lying at the bottom of the cage, as I thought, dead. He was stone-cold to the touch and showed absolutely no signs of life. I took the bird in my hand into a very warm room, where, after about half an hour, I suddenly felt his heart beat; then he opened one eye and then the other, and put his long thin tongue out. I put the tongue into some hot syrup, to which I had added a drop of brandy. He instantly started to feed, and in another few minutes was flying about the cage. In ten days this bird was perfectly well, and I still have him in perfect health, and he is just going through his second moult with me. It was a very cold day when he was sent over from Paris, and I think the cold and the want of food were too much for him. Most humming-birds, I believe, go into a sort of torpor as soon as the temperature goes down below a certain point. Both my humming-birds are most pugnacious and have to be kept in separate cages. To my mind, they are the most intelligent and fascinating of all birds. My sun-bird mixture is made up in the following way:—I mix into a paste one heaped-up tea-spoonful of Mellin's food, one tea-spoonful of honey, half a tea-spoonful of Nestlé's milk, and the inside of about a dozen meal-worms, and add to this a large breakfast-cupful of boiling water. All my sun-birds have thriven on this food, and I have one now that I have had for five years and it is still in perfect health. I use the same food for the above two humming-birds—the first and only ones I have ever had—with great success."